ACCESS MANAGEMENT

Innovative Analysis of Access

HNTB 90 Years

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Access Management Conference
September 1, 2004

Agenda

- Traffic Access Management Applications
  Presented by Kip Strauss, AICP
  HNTB Corporation
- Land Use and Access Management
  Presented by Brian Comer, AICP
  HNTB Corporation
- Public Involvement and Access Management
  Presented by Eric Saggars, PE
  HNTB Corporation
- Right Turns: The K-7 State & Local Planning Exercise
  Presented by Michael DeMent, APR
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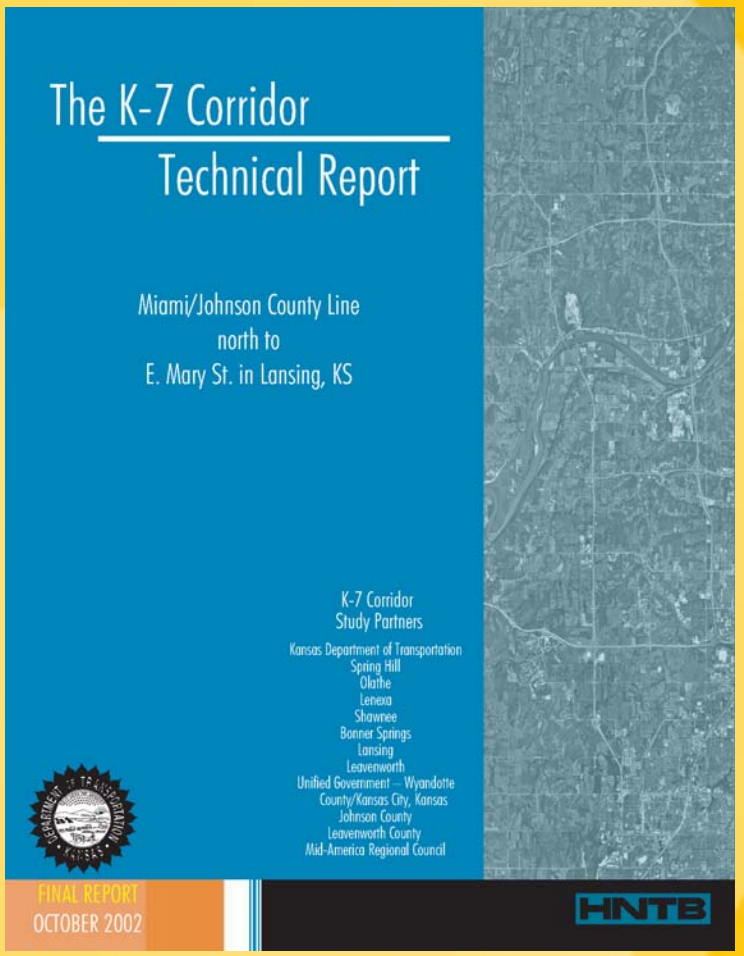
Traffic Access Management Applications

Corridor Management and Preservation for Kansas Route 7

Kip Strauss, AICP
HNTB Corporation

K-7 Corridor Technical Report, 2002

1. Background
2. Study Approach
3. **Technical Analysis**
4. Public Involvement
5. Engineering
6. Next Steps



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K-7 Corridor Technical Report

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K-7 Corridor Technical Report

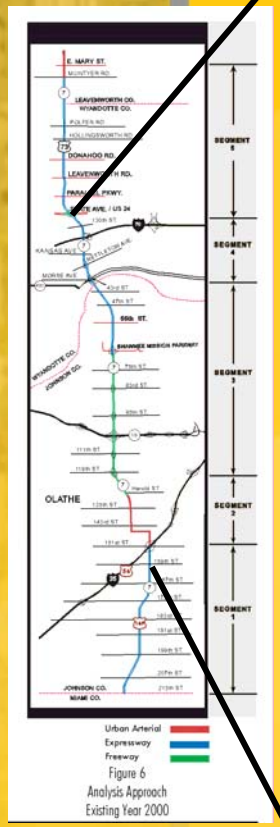
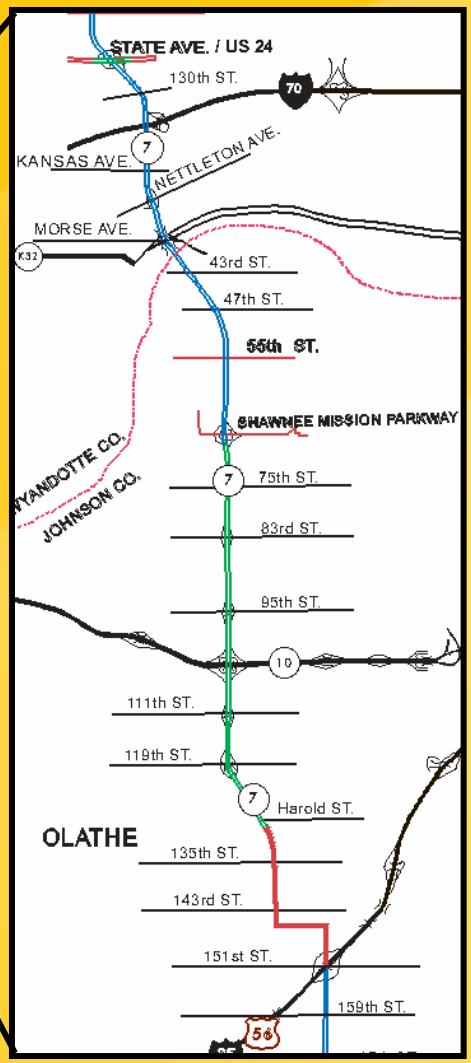
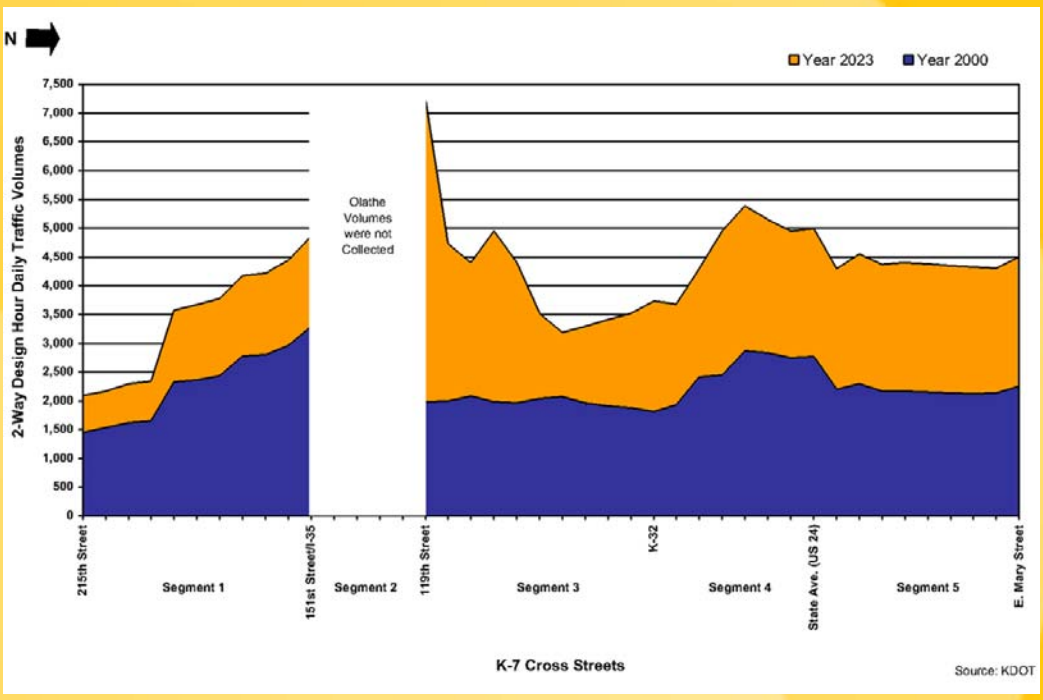


Figure 6
Analysis Approach
Existing Year 2000



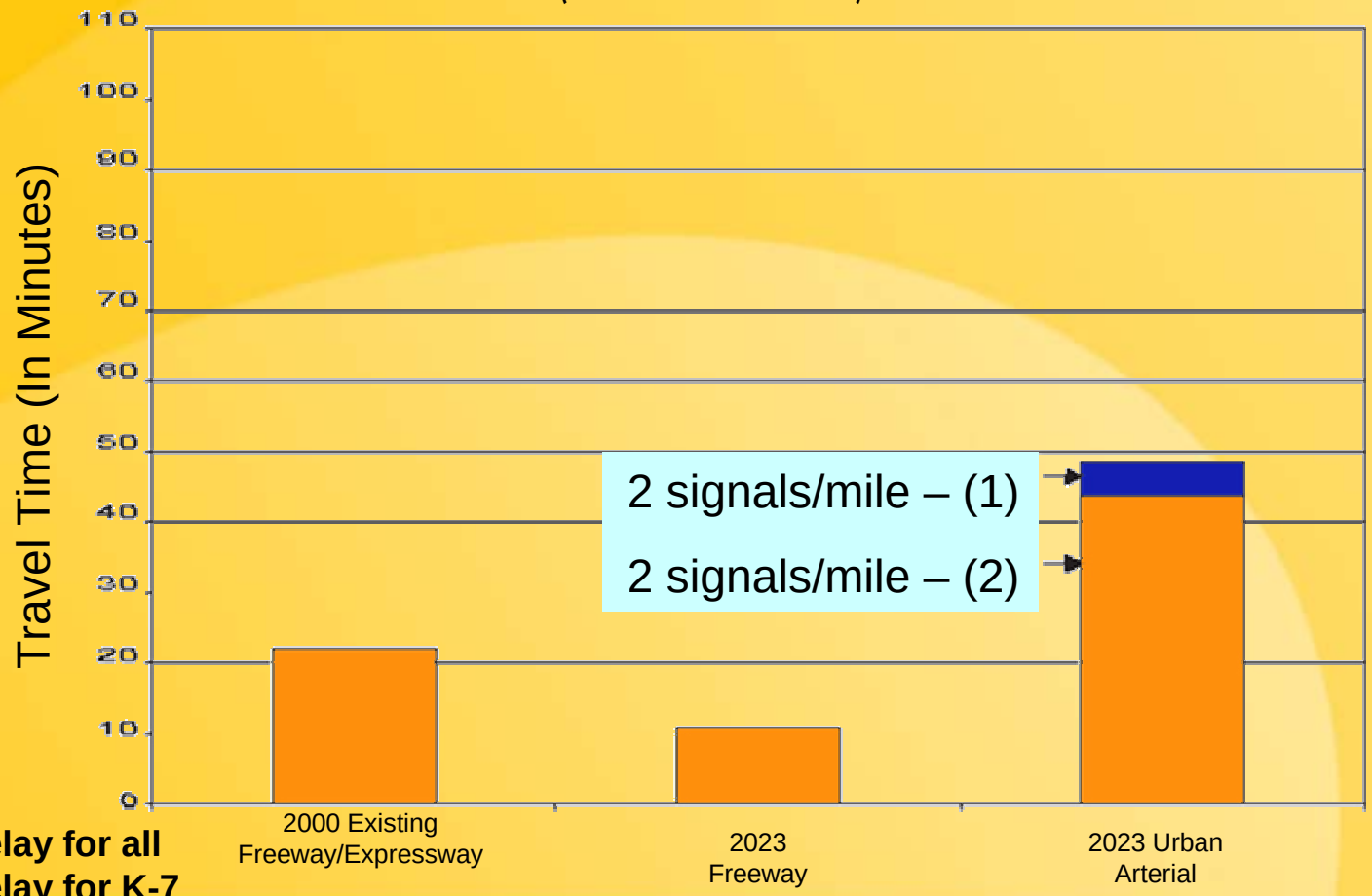


K-7 Corridor Technical Report

K-7 Travel Times

K-10 to I-70
(Northbound Direction)

11 Miles



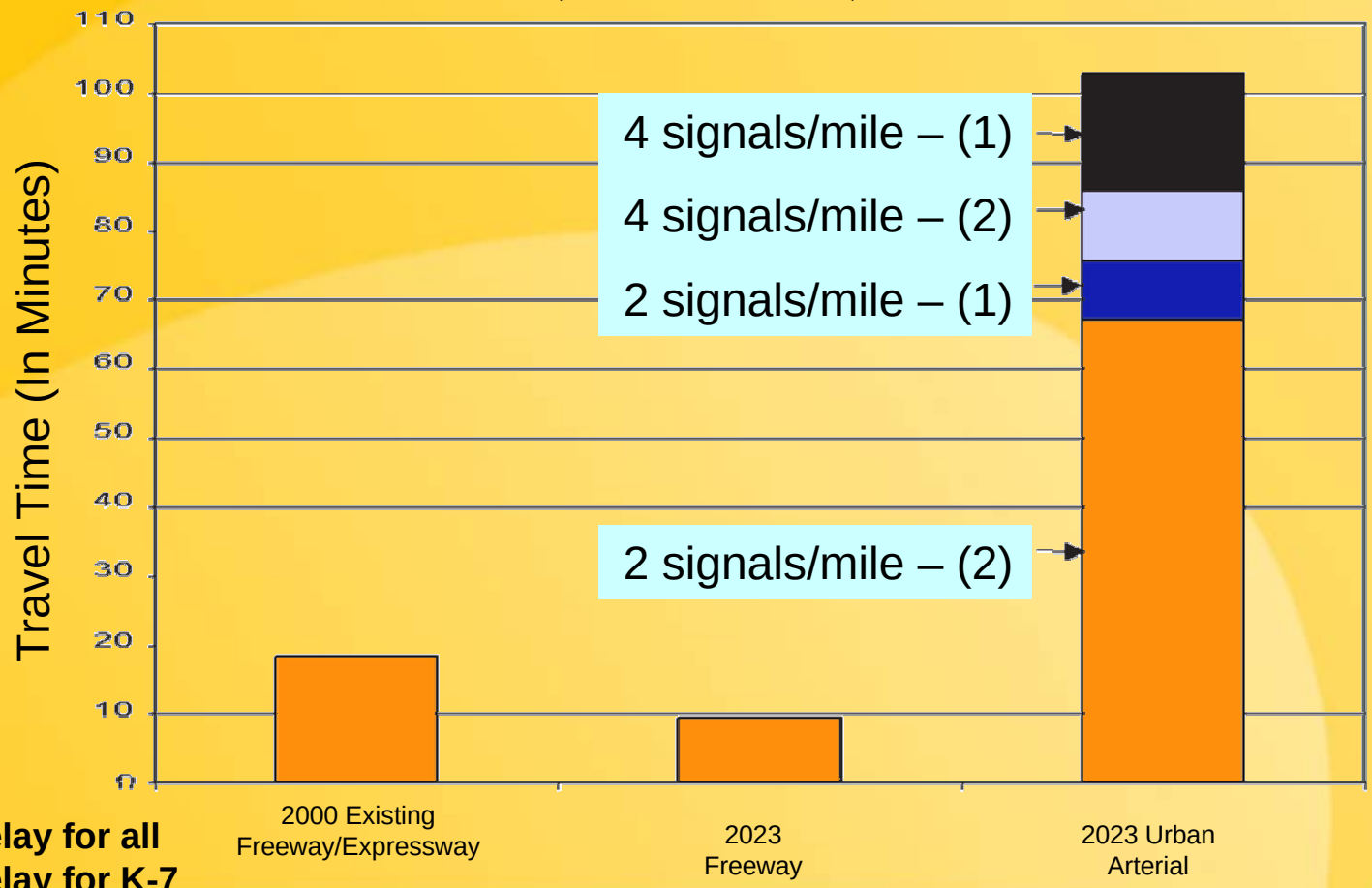
1 - Minimize Delay for all
2 - Minimize Delay for K-7

K-7 Corridor Technical Report

K-7 Travel Times

I-70 to Mary Street
(Northbound Direction)

12 Miles



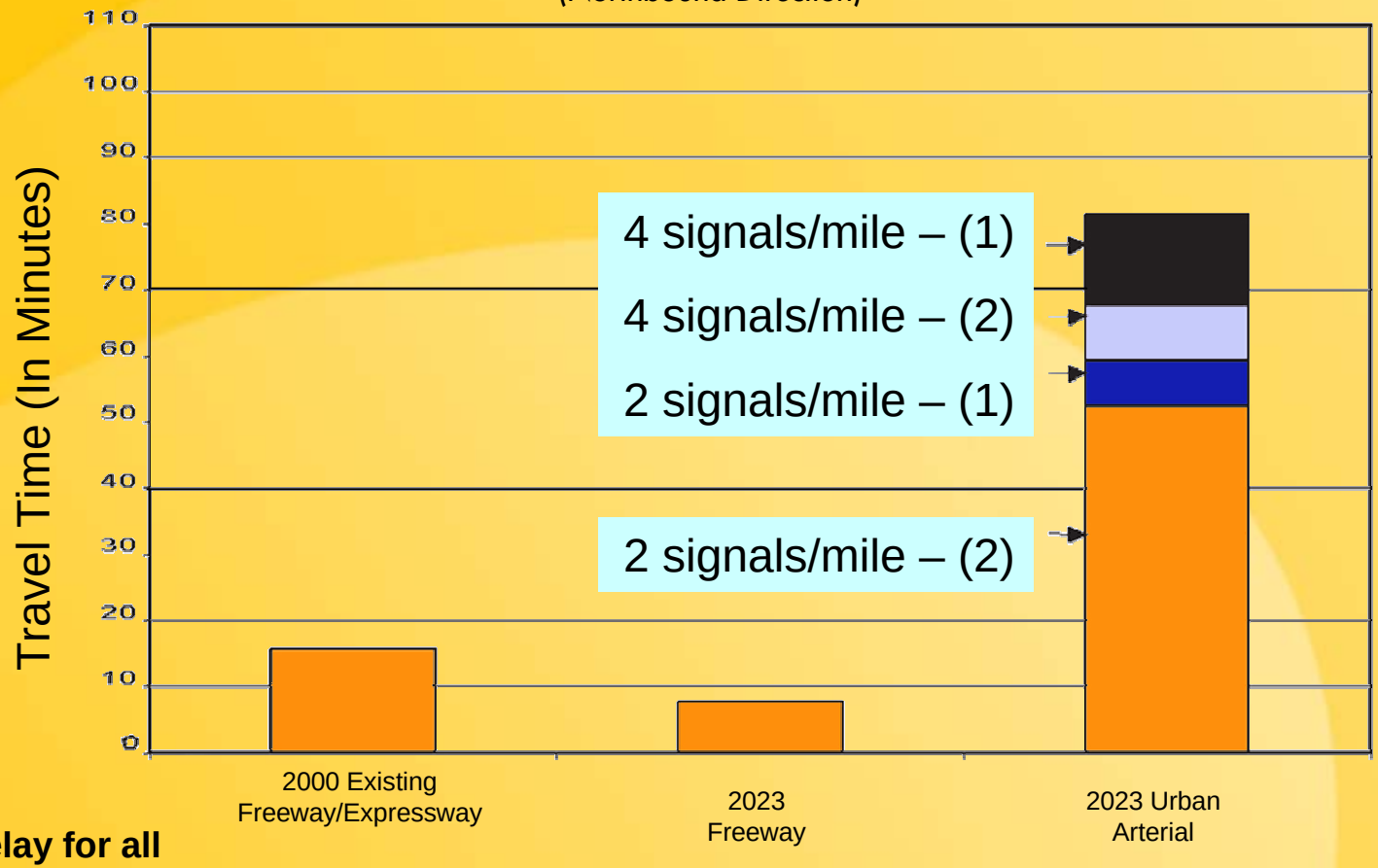
1 - Minimize Delay for all
2 - Minimize Delay for K-7

K-7 Corridor Technical Report

K-7 Travel Times

215th St. to I-35
(Northbound Direction)

8 Miles



1 - Minimize Delay for all
2 - Minimize Delay for K-7

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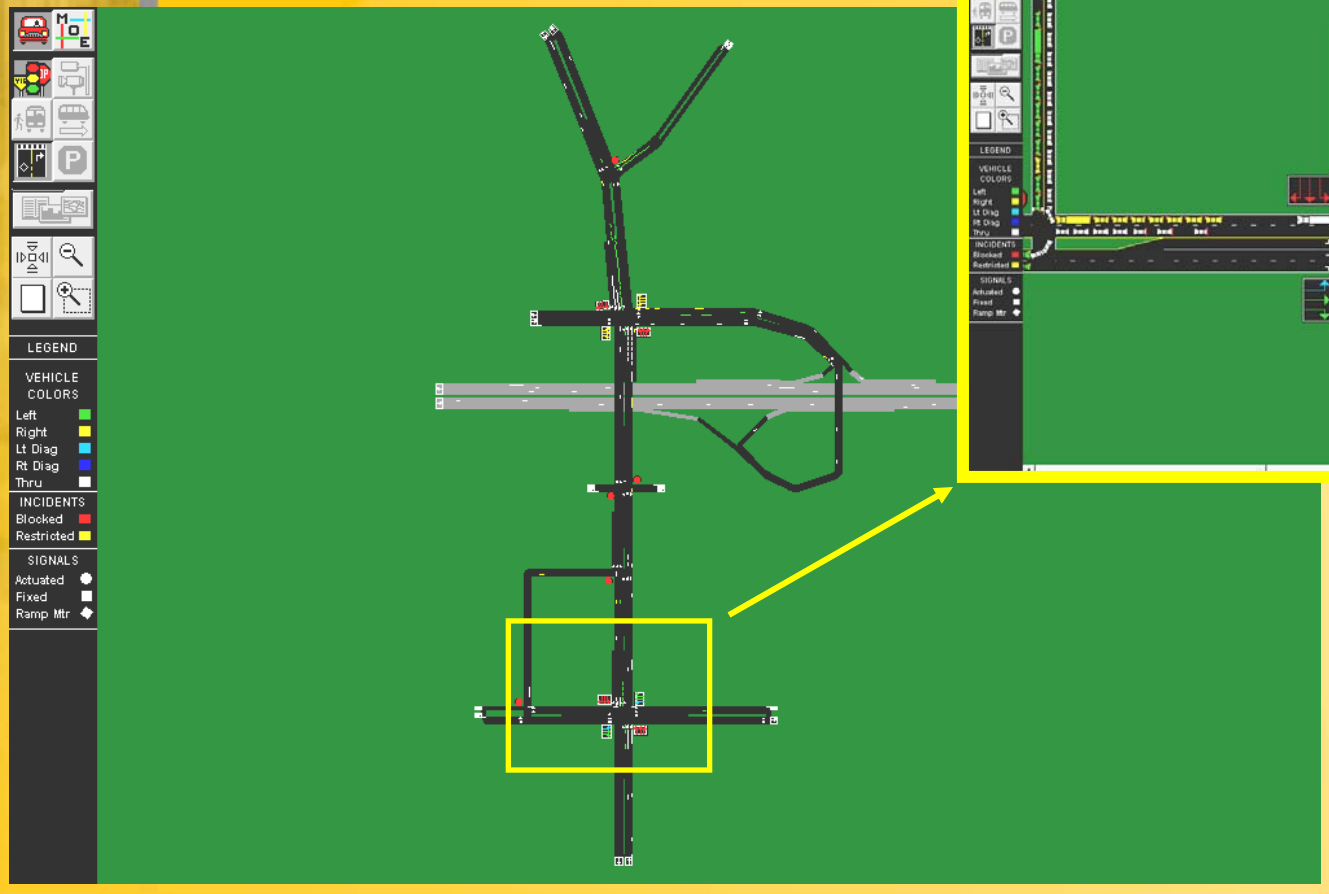
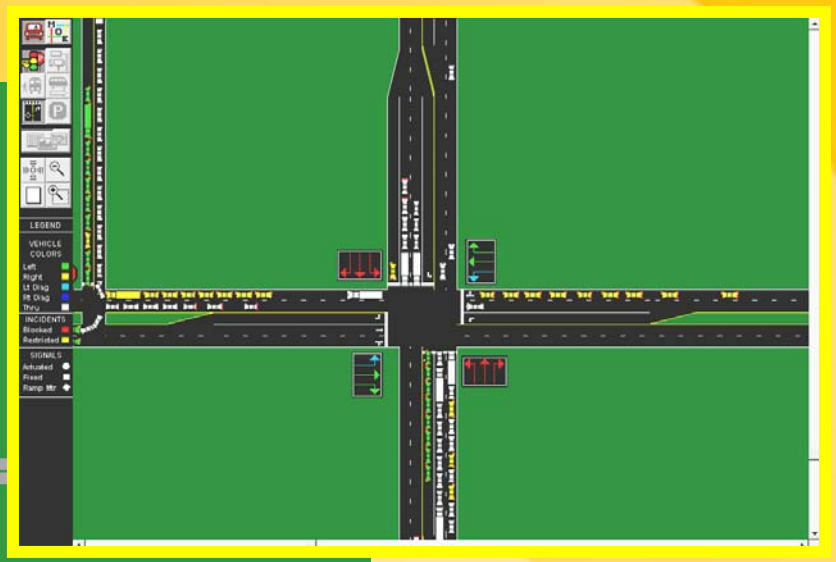
K-7 Corridor Technical Report

K-7 Simulation Model





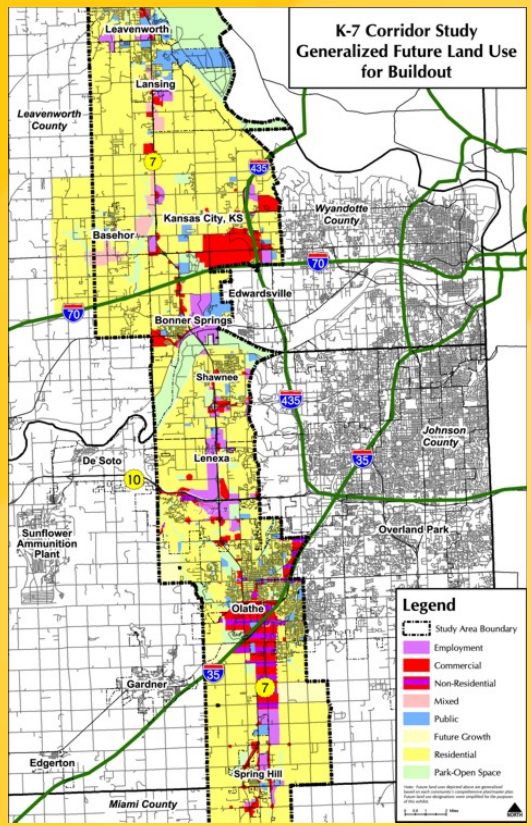
K-7 Corridor Management Study, 2005

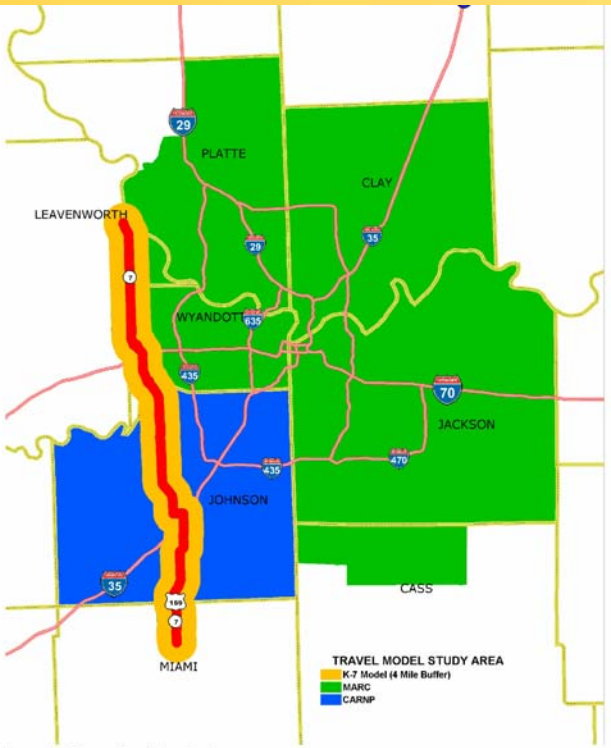
- Study Objectives
  - Community Involvement
  - **Facility Type on Mainline and Local Street Network**
  - Access Requirements / Street Network System
  - Right-of-Way Preservation Needs
  - Phased Implementation Plan
  - Memos of Understanding

K-7 Corridor Management Study

- Technical Analysis Approach
  - Travel Model Development
  - Land Use and Network Planning
  - Freeway vs. Arterial
  - Access Plan
  - Implementation Plan

K-7 Corridor Management Study





Phase 1 - Macro-Level Analysis

- Planning level tool
- Detailed traffic analysis zone structure 2 miles either side of K-7
- Detailed roadway network 2 miles either side of K-7
- Model measures of effectiveness
- Animation model of 1 selected location

Phase 2 - Micro-Level Analysis

- HCM methodology operational analysis
- Detailed operational analysis of K-7 and local street network within ½ mile of K-7
- Cursory operational analysis of local street network ½ mile to 1 mile from K-7
- Simulation model in Segment 2

K-7 Model Measures of Effectiveness

Accessibility is the ability to reach desired goods, services and destinations

Accessibility

- Average Travel Time
- Average Travel Distance

Mobility

- Select Link/Zone
- Travel Time Isochrones

Mobility is the movement of goods and people

Traffic

- Travel Demand
- Average Speed
- Volume/ Capacity
- Difference Plots

Traffic is vehicle movement

Lessons Learned

- Develop information that is easy for people to understand
- Show people the issues
- Develop tools that are flexible

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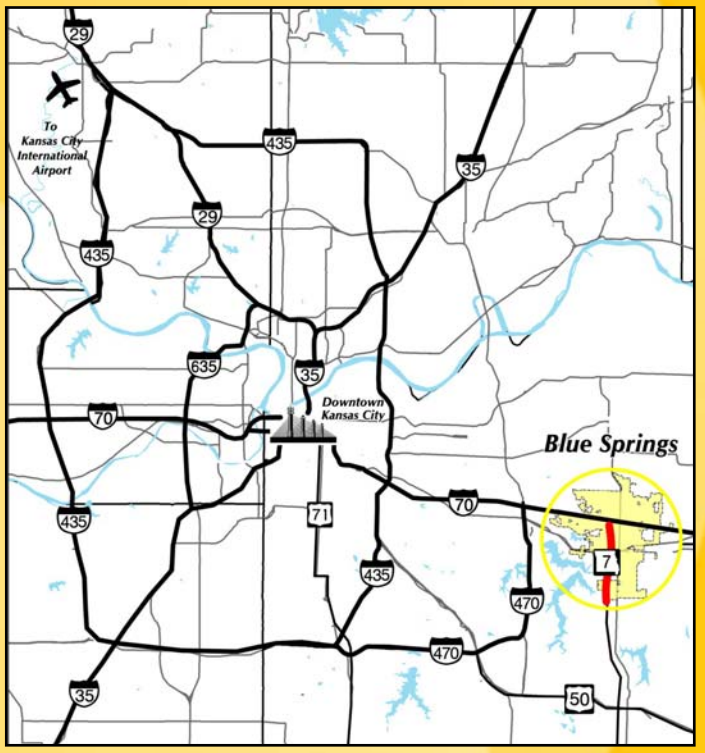
Land Use and Access Management

Brian Comer, AICP
HNTB Corporation

Land Use and Access Management

- Highway 7—Blue Springs, Missouri
  - Older Suburban Corridor
  - Two-Way Left Turn Lanes
  - Multiple Driveways



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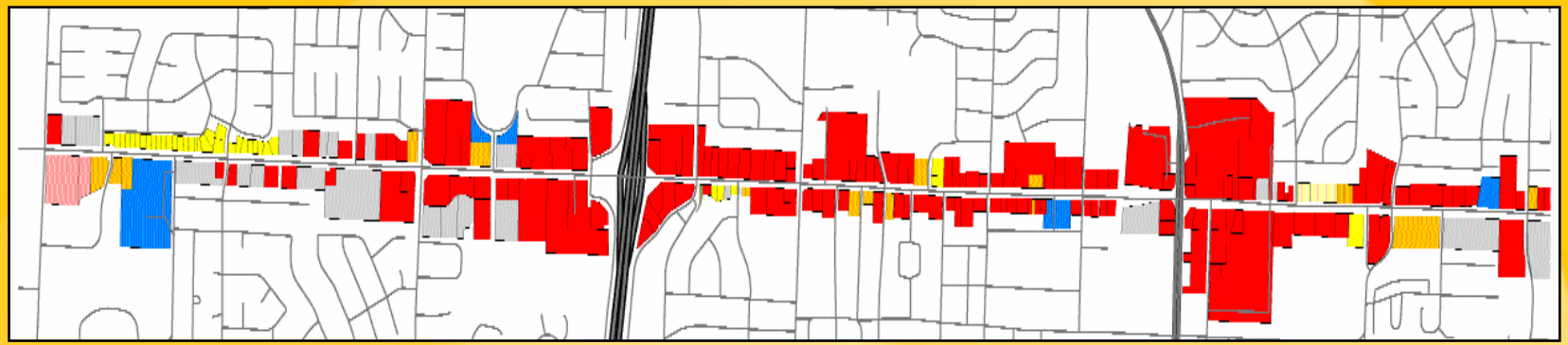
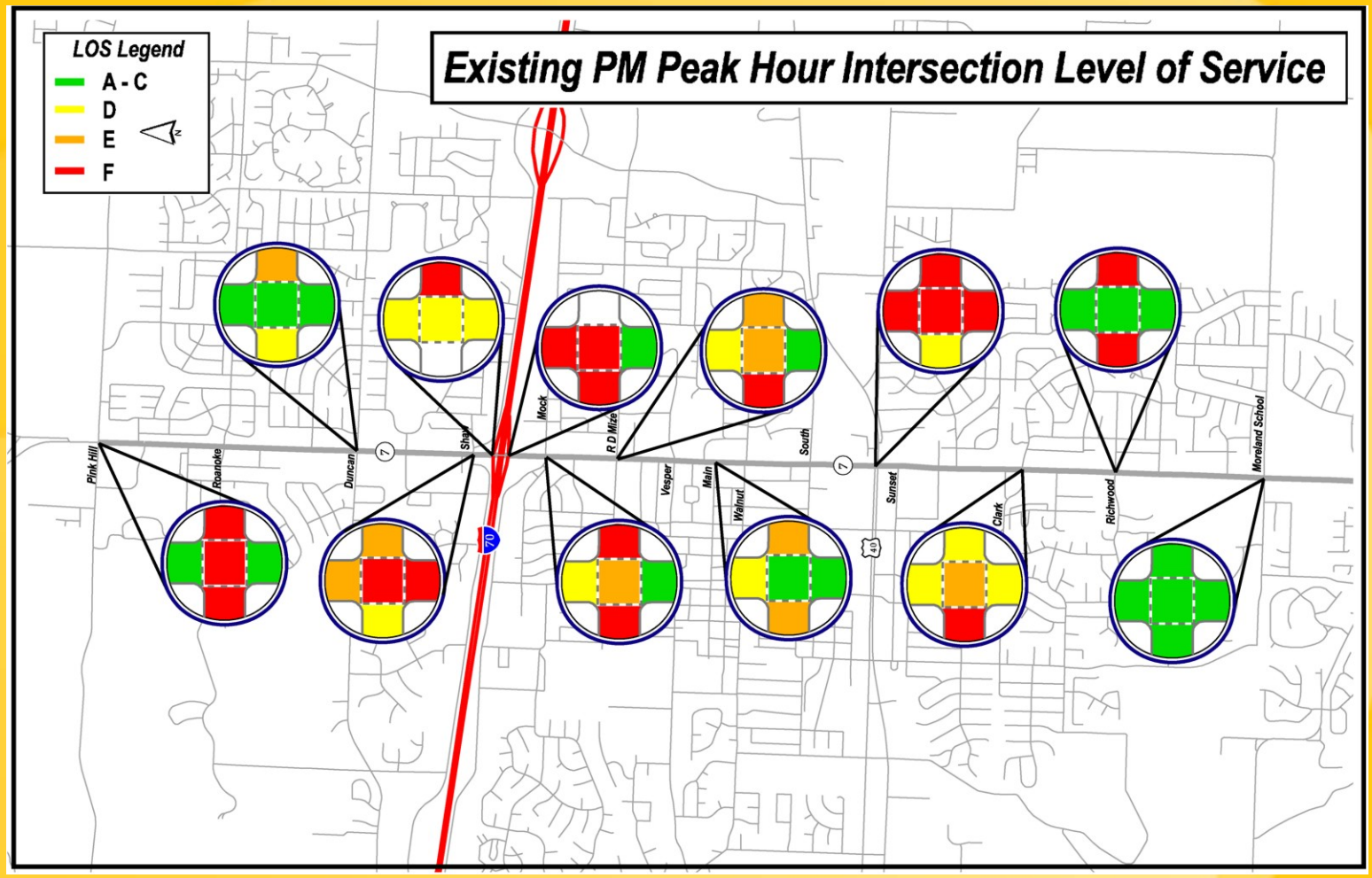
Existing Linear Development Pattern



- Commercial
- Light Industrial
- Office
- Multi-Family
- Residential
- Public/Institutional
- Ag/Undeveloped

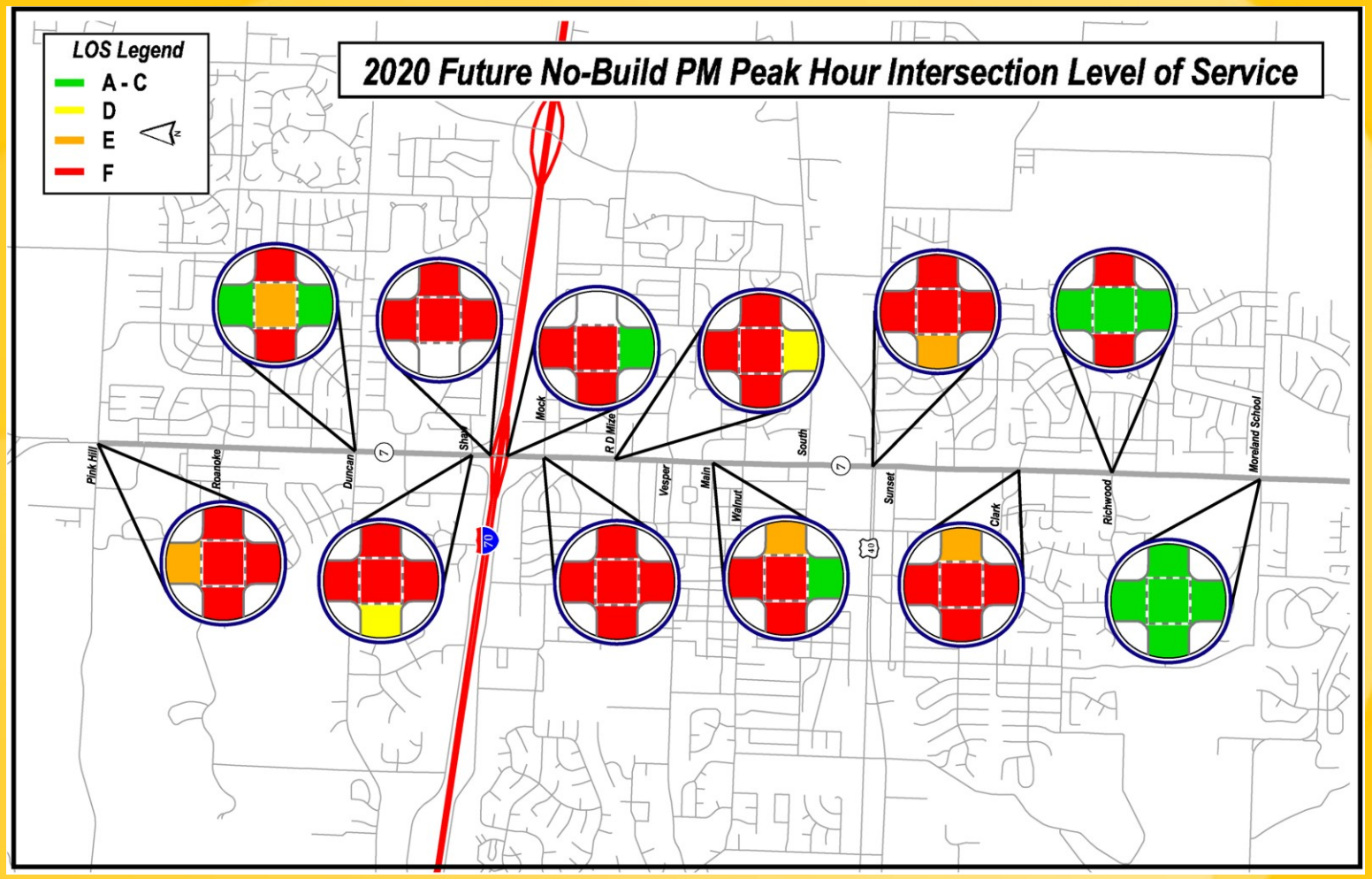
Access Management

Existing LOS



Access Management

2020 No Build LOS



Guiding Principles

- Promote Cluster Development Pattern
- Provide Cross Access
- Connect Parking Lots and Relocate Driveways
- Regulate the Location and Spacing of Driveways.
- Protect Interchange Areas
- Integrate Medians

Cluster Development

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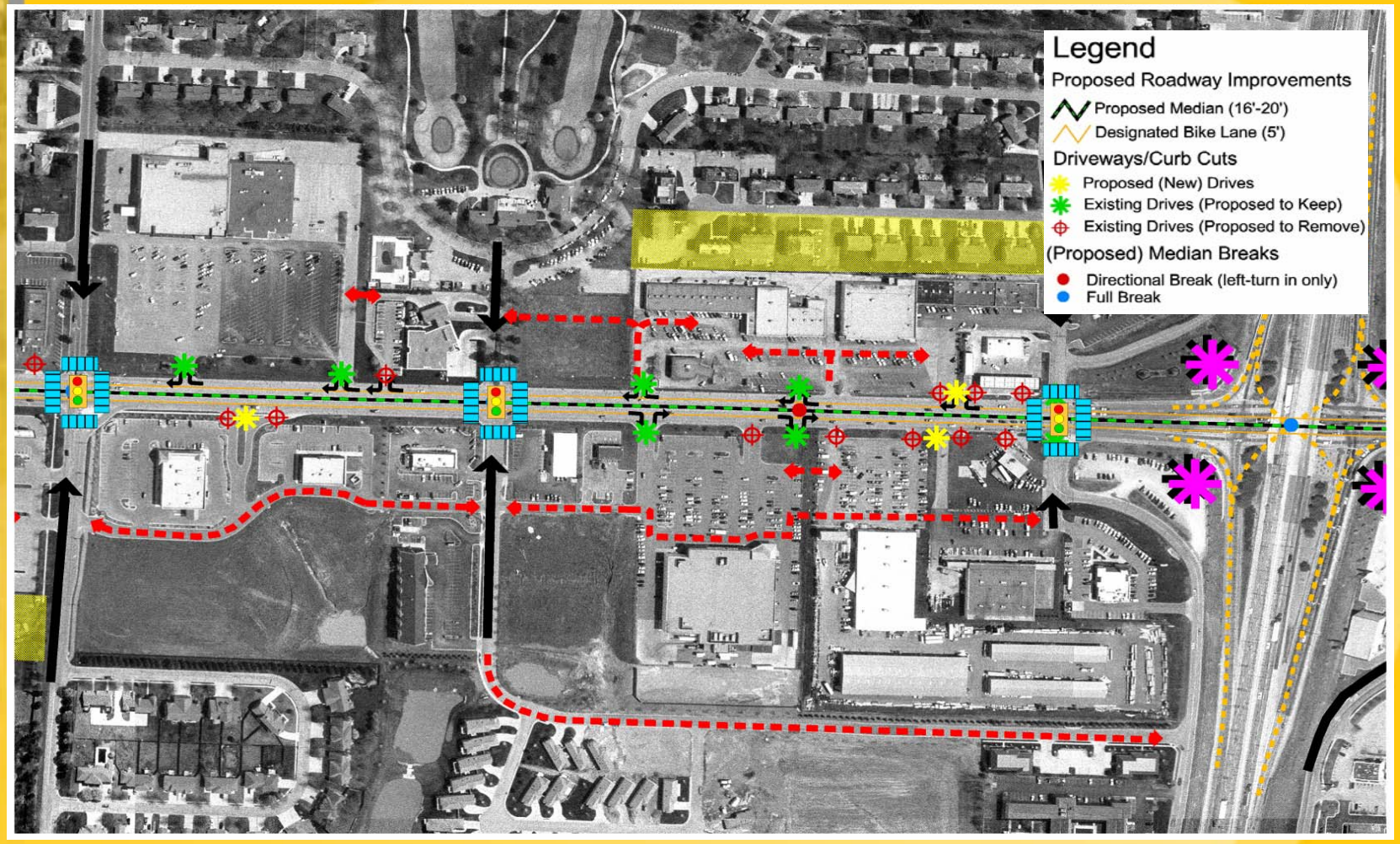
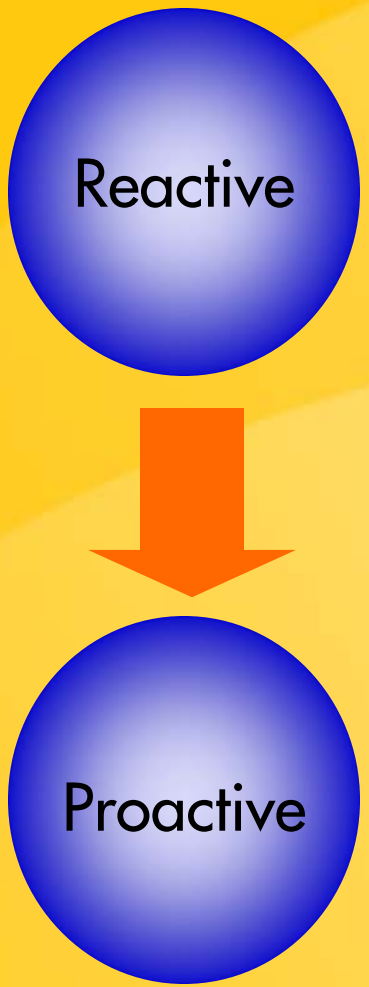
Corridor Master Plan



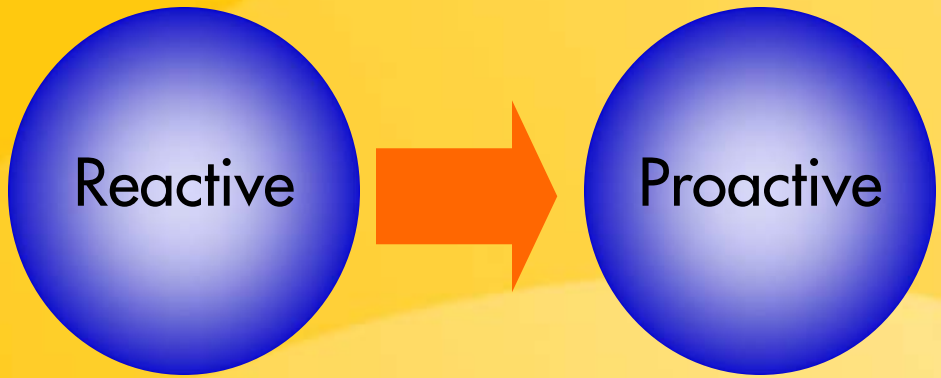
Implementation Strategies



- Improvements triggered by change of use
- Improvements triggered by redevelopment of property

- City initiates improvements

Implementation Strategies



- Utilized a Combination of Both Strategies
  - Integrated Access Management Principles into Comprehensive Plan and Development Code
  - Identified Median and Intersection Improvements

Public Outreach

Public Outreach

Access Management

Public Outreach

Lessons Learned

- Integrate Access Management into Land Use Planning from the Beginning
- Educate the Public on the Benefits of Access Management
- Follow through with Implementation of Policies and Physical Improvements

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Public Involvement and Access Management

Experiences on the US-54 Project: Pratt and Kingman Counties, Kansas

Eric Saggars, PE
HNTB Corporation

Forward US54

US-54: Project Location

Project Background

- Currently a two-lane rural highway
  - Located in South-Central Kansas
  - 44-mile-long corridor
- Convert to fully access-controlled expressway and freeway
- Preservation of the project corridor is a high priority
- Access is an important issue!

GIS-based Website

- Provides detailed alignment information
- Updated at milestones
- Also provides other project news and contact information

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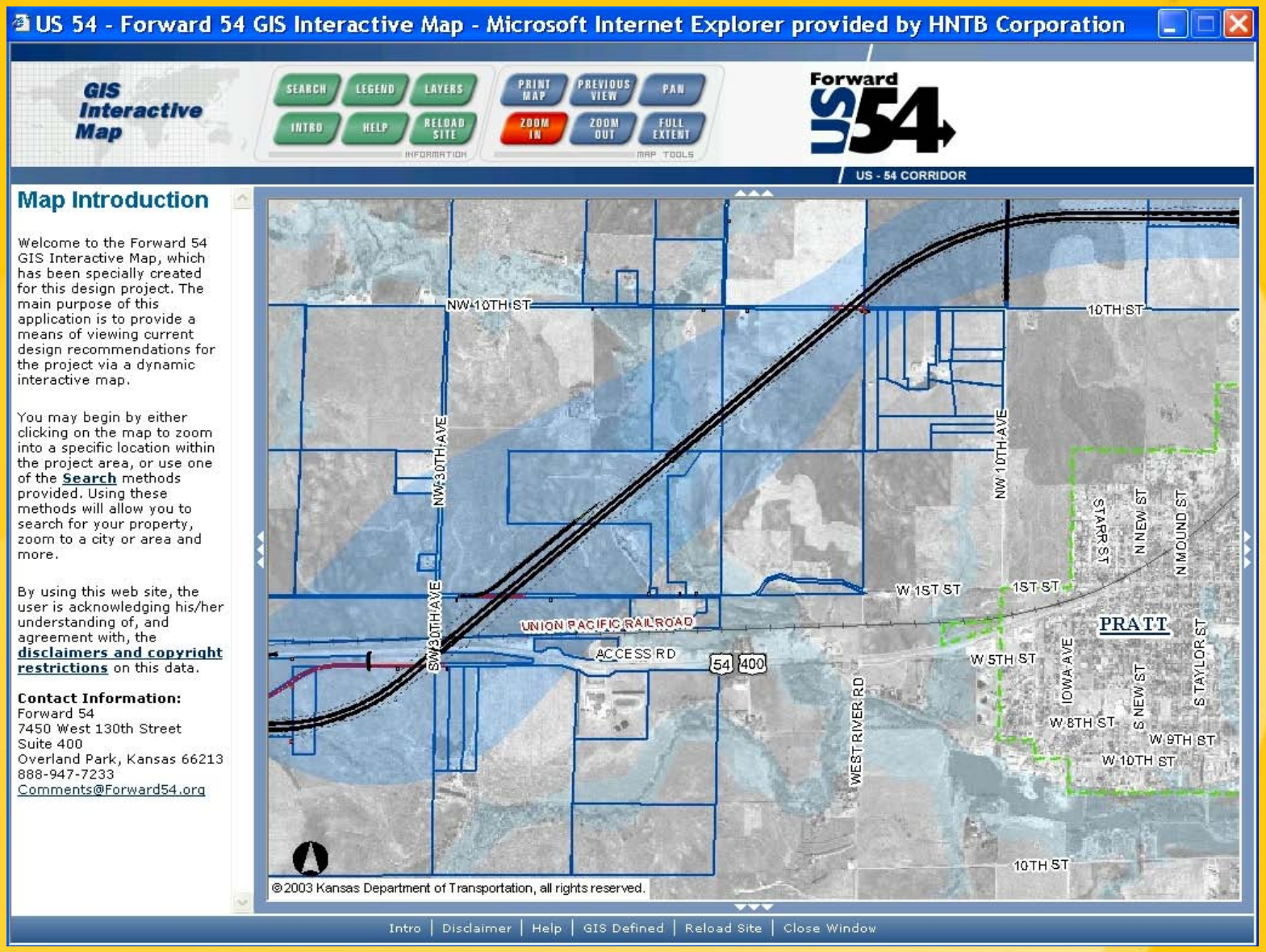

Corridor Management Plan

- A preliminary Access Control and Property Management strategy was developed as a working paper
- Focused on the ideal solution
  - Advance acquisition of R/W
  - Immediate relocations
  - Reducing number of access points
  - Constructing frontage roads
  - Long-term management with GIS

Access Management Workshops

- Two *workshops* were held
- Discussed the Corridor Mgmt. Plan
- Informed attendees on the Process
  - Formal presentation
  - Case studies in small groups
  - Open discussion

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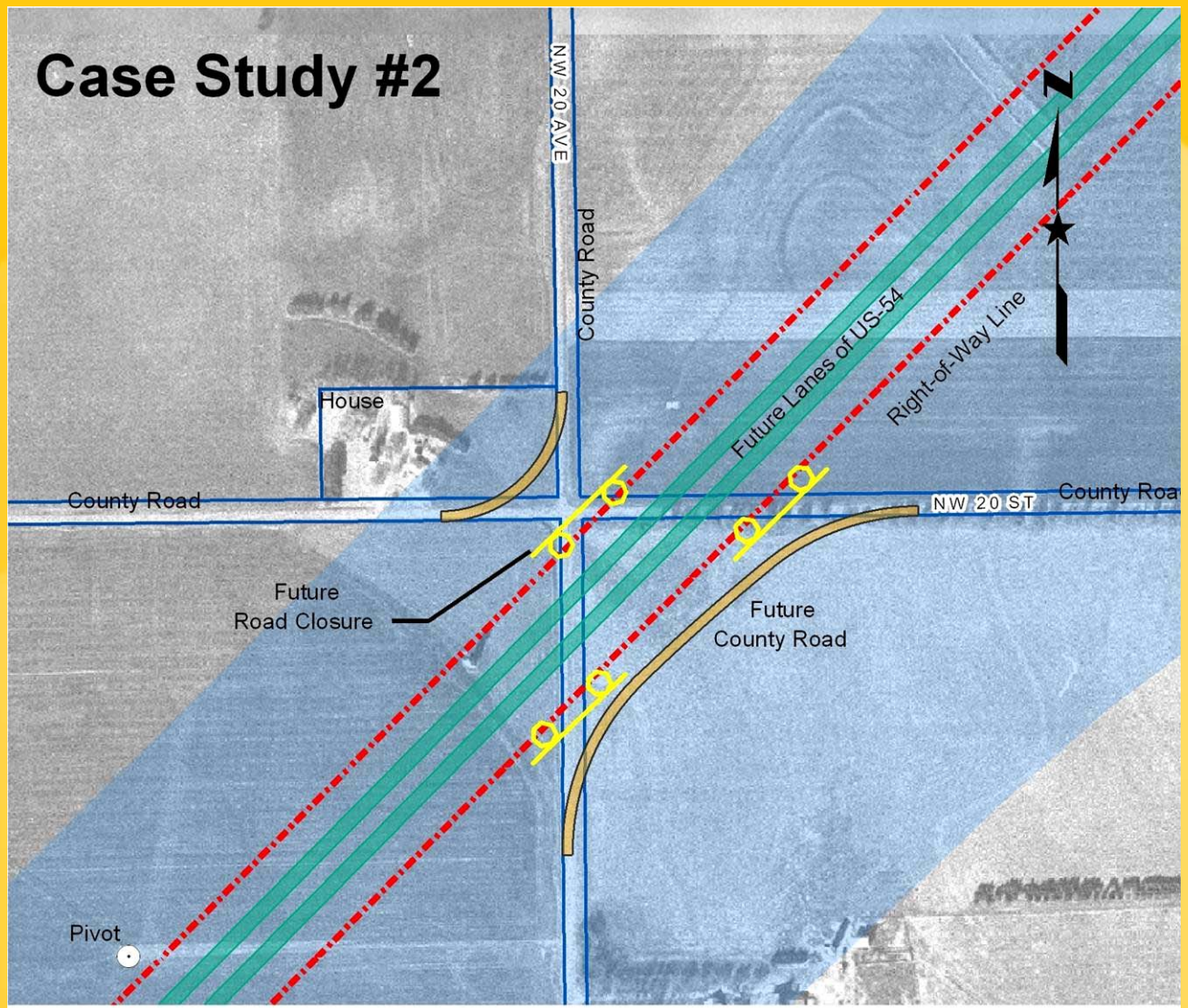
Case Study #2



NOTE: This illustration depicts concepts for discussion purposes only as part of the Corridor Management Workshop with public officials as part of the US-54 Pratt to Kingman project. The exact location, design, and right-of-way for completed improvements cannot be determined from this drawing and could be different from those shown. Details of right-of-way and individual access will be determined during design activities that will occur later. Date of illustration July 24, 2003.

Determine "Categories" of R/W and Access Changes

Increasing Impacts

- Access not affected
- Field entrance adjustment
- Residence/Driveway adjustment
- Frontage road required
- Parcel to be landlocked
- Total acquisition

Permitted Driveways located via GIS

"Kitchen Table" Meetings

- Decide what to do with each property owner's access points
- Get input on how they use their property
- Get initial indications of the owner's disposition
- Provide an opportunity to express opinions

Property Management Plan

- Project is 44 miles long with approximately 253 parcels
- Preservation is a long-term issue for KDOT (land, fencing, mowing)
- Our next steps:
  - Develop a policy for R/W acquisition
  - Develop a GIS-based Access Control and Property Management Application

Lessons Learned

- Communicate early and often with local governments and the impacted residents
- Be responsive and flexible to local needs
- Capture and preserve information for later use

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Right Turns:

The K-7 State and Local Planning Exercise

Michael DeMent, APR
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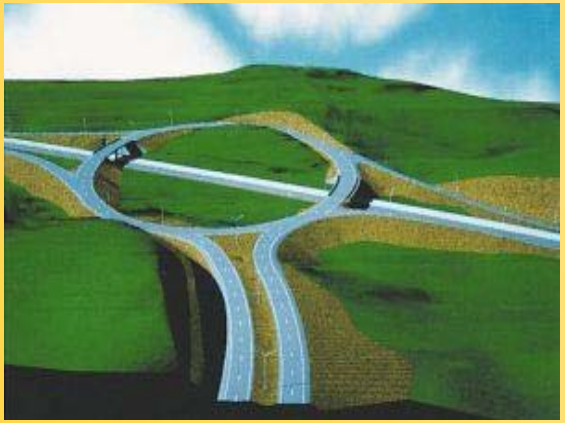
"Right Turns" Interactive Exercise

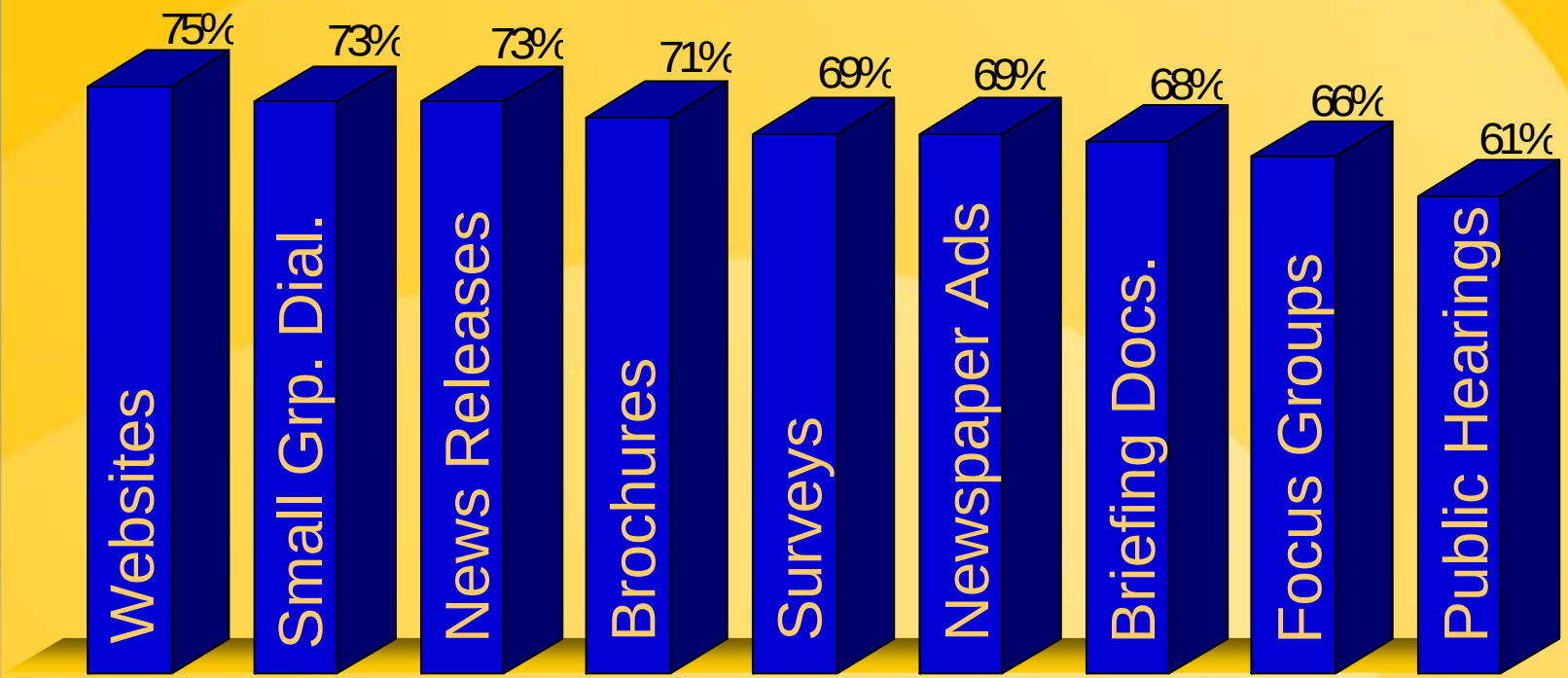
- Education and input "game"
- Simplified transportation/planning rules
- Scale-model components based on rules
- Facilitated assembly by stakeholders teams
- Adaptable/transportable for future projects



Access Management

- Attributes
  - Length
  - Diversity
- Attitudes
  - Development
  - Politics
- Actions
  - Time horizon
  - Funding realities
  - Coordinated response

Communication Isn't The Issue

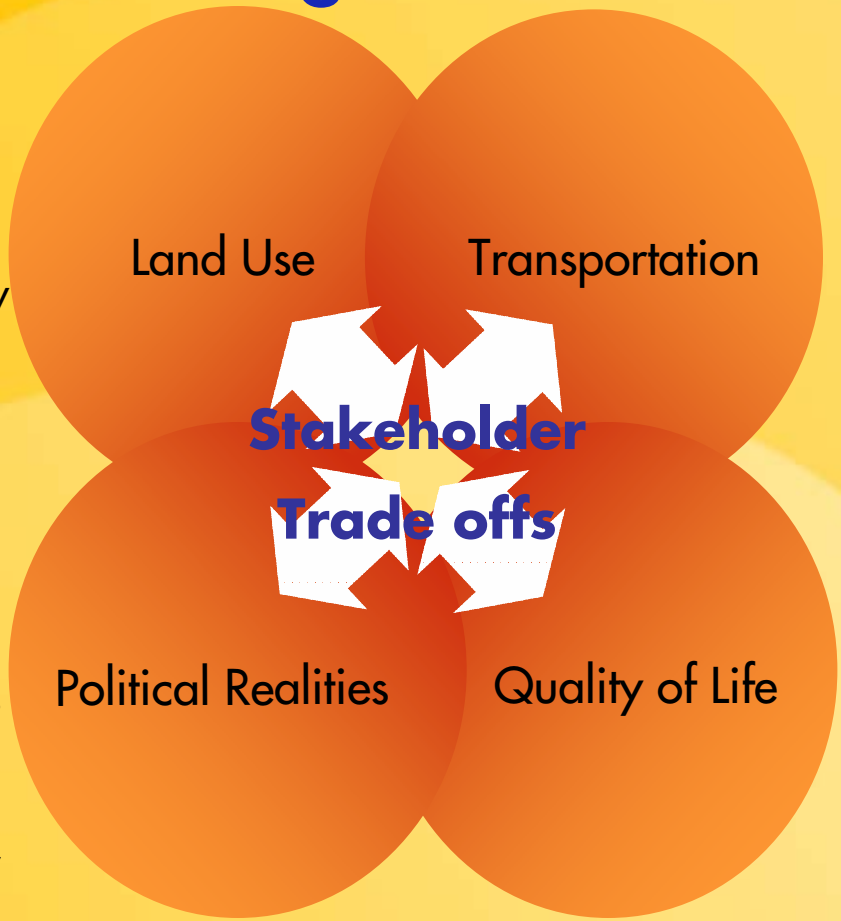


Intl. Assoc. of Public Participation Survey

Access Management

The Key is Facing Trade-offs

- Accessibility
- Local impacts
- Econ. development
- Property rights
- Dev. type & density
- Development desires vs. reality



- Mobility
- Regional impacts
- Funding needs vs. realities
- User types
- Ideal vs. realistic facilities

- Funding
- Timing
- Decision influences
- State local partnership
- Our needs vs. your needs

- Safety
- Economic opportunity
- Environmental concerns
- Noise
- Traffic
- Community identity

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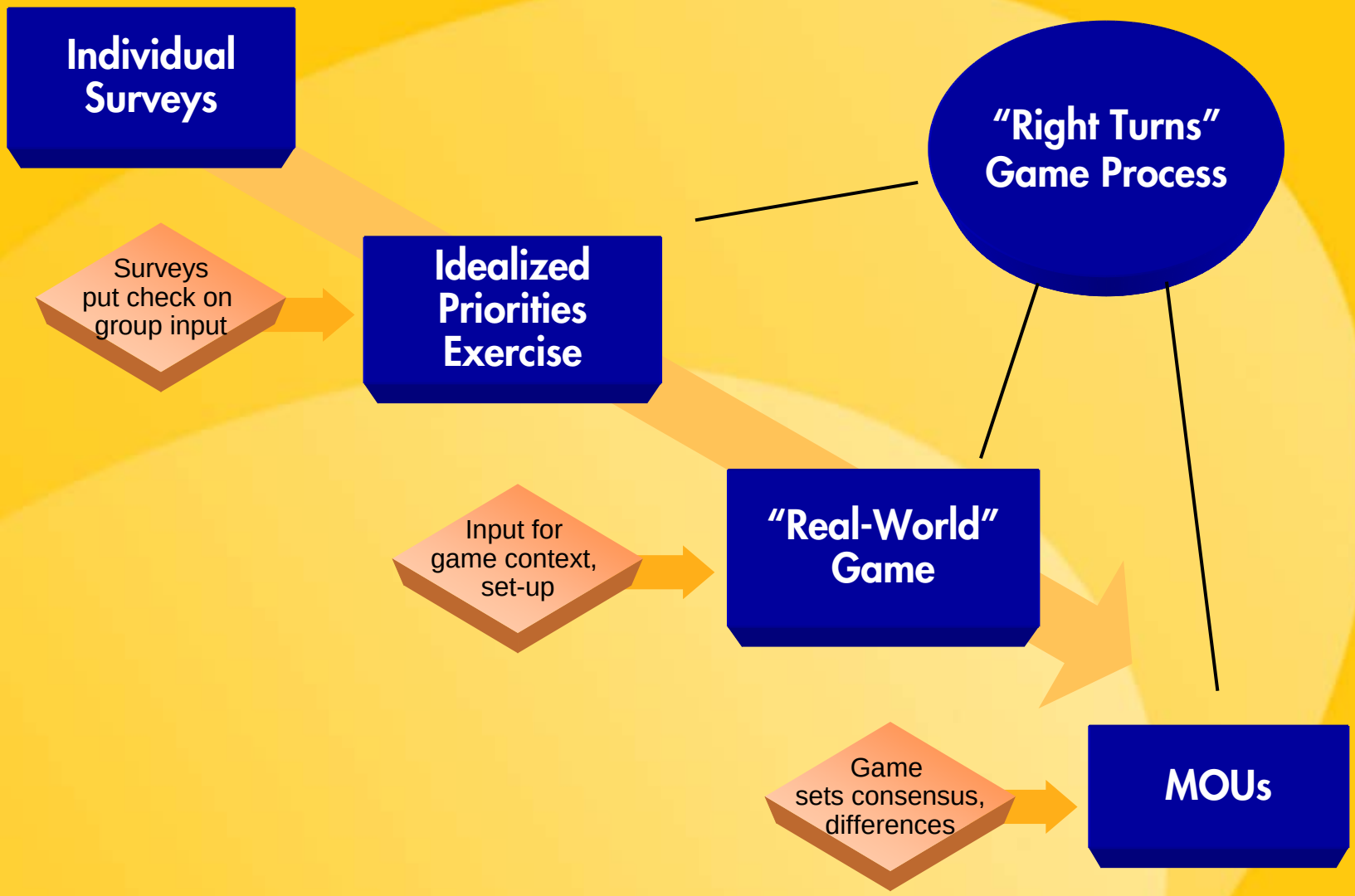


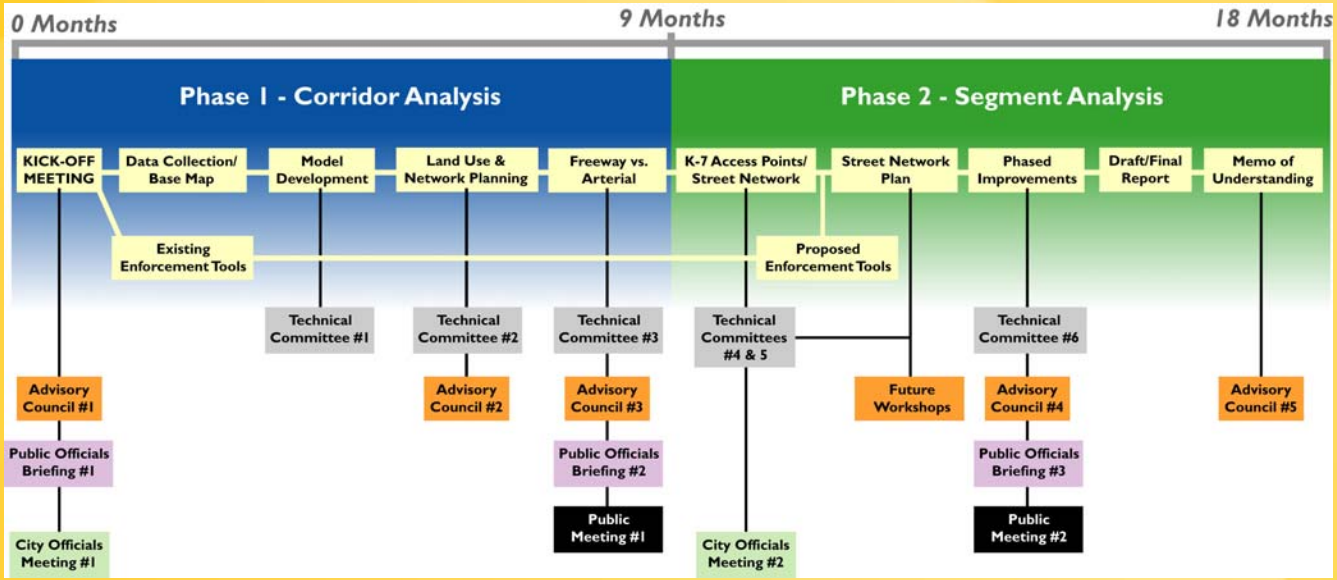
Game Attributes

- Aerial maps/plexiglass holders/markers
- "Garden marker" flags for specific traits/issues
- Consultant "referees" and impact flags
- Facilitated segment discussion
- Electronic documentation

Access Management

Project Schedule

- Complex project
- Extensive public involvement
- Collaborative process
- Multiple feedback streams
- Boundaries of political will/community vision
- Memos of understanding/lasting partnerships



Results

Determination

- Areas of differences
- Opportunities for consensus
- MOUs & political will

Education

- KDOT planning process
- Land use & transportation concepts
- Realistic expectations

Futures Workshops

Visualization

- Personal, community values
- Actionable feedback
- Facility, land use and transportation trade-offs

Demonstration

- Links between facilities, traffic and development
- Impact on K7 design
- Interplay with local roads

Lessons Learned

- Multiple feedback streams needed to get full picture
- Stakeholders want even greater consultation
- Visible, actionable feedback is key to good results for all parties

Innovative Analysis of Access

Questions?